



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2013-0823; FRL-9911-04-Region 9]

Approval of Air Quality Implementation Plan Revisions; State of California; South Coast VMT Emissions Offset Demonstrations

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a state implementation plan (SIP) revision submitted by the State of California to meet the vehicle miles traveled emissions offset requirement under the Clean Air Act for the 1-hour ozone and 1997 8-hour ozone national ambient air quality standards (NAAQS) in the Los Angeles-South Coast Air Basin. The EPA is proposing to approve this revision because it demonstrates that California has put in place specific enforceable transportation control strategies and transportation control measures to offset the growth in emissions from the growth in vehicle miles traveled and vehicle trips in the South Coast, and thereby meets the applicable requirements of the Clean Air Act. The EPA is taking comments on this proposal and plans to follow with a final action.

DATES: Any comments must be submitted by [Insert date 30 days from the date of publication in the Federal Register].

ADDRESSES: Submit comments, identified by docket number EPA-R09-OAR-2013-0823, by one of the following methods:

- Federal eRulemaking Portal: www.regulations.gov. Follow the on-line instructions.
- E-mail: ungvarsky.john@epa.gov.
- Mail or deliver: John Ungvarsky, Air Planning Office (AIR-2), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105.

Instructions: All comments will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, and the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send

e-mail directly to the EPA, your e-mail address will be automatically captured and included as part of the public comment. If the EPA cannot read your comments due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment.

Docket: The index to the docket for this action is available electronically on the www.regulations.gov website and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California, 94105. While all documents in the docket are listed in the index, some information may be publicly available only at the hard copy location (e.g., copyrighted material), and some may not be publicly available at either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section below.

FOR FURTHER INFORMATION CONTACT: John Ungvarsky, Air Planning Office (AIR-2), U.S. Environmental Protection Agency, Region IX, (415) 972-3963, ungvarsky.john@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us" and "our" refer to the EPA.

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I. Regulatory Background

A. Ozone National Ambient Air Quality Standards

Ground-level ozone is formed when oxides of nitrogen (NO_x) and volatile organic compounds (VOC) react in the presence of sunlight. These two pollutants, referred to as ozone precursors, are emitted by many types of pollution sources, including on- and off-road motor vehicles and engines, power plants and

industrial facilities, and smaller area sources such as lawn and garden equipment and paints.

Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and adults with lung disease. Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases. Ozone exposure also has been associated with increased susceptibility to respiratory infections, medication use, doctor visits, and emergency department visits and hospital admissions for individuals with lung disease. Ozone exposure also increases the risk of premature death from heart or lung disease. Children are at increased risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors, which increases their exposure.

In 1979, under section 109 of the Clean Air Act (CAA or Act), the EPA established primary and secondary national ambient air quality standards (NAAQS, standards, or standard) for ozone at 0.12 parts per million (ppm) averaged over a 1-hour period (referred to herein as the "1-hour ozone standard" or "1-hour ozone NAAQS"). See 44 FR 8202 (February 8, 1979).

In 1997, the EPA revised the ozone NAAQS to set the acceptable level of ozone in the ambient air at 0.08 ppm, averaged over an 8-hour period (referred to herein as the "1997 8-hour ozone standard" or "1997 8-hour ozone NAAQS"). See 62 FR 38856 (July 18, 1997). The EPA set the 8-hour ozone standard based on scientific evidence demonstrating that ozone causes adverse health effects at lower concentrations and over longer periods of time than was understood when the previous 1-hour ozone standard was set. The EPA determined that the 8-hour ozone standard would be more protective of human health, especially children and adults who are active outdoors, and individuals with a pre-existing respiratory disease, such as asthma.

In 2008 (73 FR 16436, March 27, 2008), the EPA revised and further strengthened the primary and secondary NAAQS for ozone by setting the acceptable level of ozone in the ambient air at 0.075 ppm, averaged over an 8-hour period ("2008 8-hour ozone standard"). Today's proposed action relates only to the 1-hour and 1997 8-hour ozone standards and does not relate to the 2008 8-hour ozone standard.

B. South Coast Ozone Designations and Classifications

Section 107 of the CAA requires the EPA to designate all areas of the country as nonattainment, attainment, or

unclassifiable for each of the NAAQS, depending upon whether such areas experience violations of the NAAQS or contribute to violations in a nearby area. In the late 1970s, the EPA designated the Los Angeles-South Coast Air Basin Area (South Coast)¹ as nonattainment for the 1-hour ozone NAAQS. Under the 1990 CAA Amendments, ozone nonattainment areas were further classified, based on the severity of their nonattainment problem, as "Marginal", "Moderate," "Serious," "Severe,"² or "Extreme," and the South Coast was classified as "Extreme" nonattainment for the 1-hour ozone standard. See 56 FR 56694 (November 6, 1991).

In 2004, the EPA designated areas of the country with respect to the 1997 8-hour ozone standard, 69 FR 23858 (April 30, 2004), and the EPA designated the South Coast as "Severe-17"³ for the 1997 ozone standard, but later granted the State of

¹ The South Coast includes Orange County, the southwestern two-thirds of Los Angeles County, southwestern San Bernardino County, and western Riverside County. The South Coast is home to approximately 17 million people, has a diverse economic base, and contains one of the highest-volume port areas in the world. For a precise description of the geographic boundaries of the South Coast, please see 40 CFR 81.305.

² In EPA's final rule to classify nonattainment areas for the 1-hour ozone standard, Severe areas were classified as either Severe-15 or Severe-17 based on their design value. See 56 FR 56694 (November 6, 1991).

³ In EPA's final rule to classify nonattainment areas for the 1997 8-hour ozone standard, Severe areas were classified as either Severe-15 or Severe-17 based on their design value. See 69 FR 23858 (April 30, 2004).

California's request to reclassify the South Coast to "Extreme" for that standard. See 75 FR 24409 (May 5, 2010).

C. Previous South Coast VMT Emissions Offset Demonstrations

Once the EPA has promulgated a NAAQS, states are required to develop and submit plans that provide for the implementation, maintenance, and enforcement of the NAAQS under CAA section 110(a)(1). The content requirements for such plans, which are referred to as state implementation plans (SIPs) are found in CAA section 110(a)(2). The CAA further requires states with nonattainment areas to submit revisions to their SIPs that provide for, among other things, attainment of the relevant standard within certain prescribed periods.

In California, as a general matter, the California Air Resources Board (CARB) is responsible for adoption and submittal to the EPA of California SIPs and California SIP revisions and is the primary State agency responsible for regulation of mobile sources. Local and regional air pollution control districts are responsible for developing regional air quality plans and for regulation of stationary sources. For the South Coast, the South Coast Air Quality Management District (SCAQMD or District) develops and adopts air quality management plans (AQMPs) to address CAA SIP planning requirements applicable to that region.

Generally, such AQMPs are then submitted to CARB for adoption and submittal to the EPA as revisions to the California SIP.

Under the CAA, as amended in 1990, the control requirements and date by which attainment of the 1-hour ozone standard was to be achieved varied with an area's classification. "Extreme" areas, such as the South Coast, were subject to the most stringent planning requirements but were provided the most time to attain the standard (i.e., until 2010). The various ozone planning requirements to which "Extreme" ozone nonattainment areas were subject are set forth in section 172(c) and section 182(a)-(e) of the CAA.

The specific ozone planning requirement that is relevant for the purposes of this action is CAA section 182(d)(1)(A), which, in relevant part, requires the state, if subject to its requirements, to "submit a revision that identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area."⁴ Herein, we use "VMT" to refer to

⁴ CAA section 182(d)(1)(A) includes three separate elements. Please see the related discussion in our proposed rule withdrawing our previous approvals of the South Coast VMT emissions offset demonstrations and disapproving the same at 77 FR 58067, at 58068 (September 19, 2012). This proposed action relates only to the first element of CAA section 182(d)(1)(A) (i.e., the VMT

vehicle miles traveled and refer to the related SIP requirement as the "VMT emissions offset requirement." In addition, we refer to the SIP revision intended to demonstrate compliance with the VMT emissions offset requirement as the "VMT emissions offset demonstration."

As described above, in 1997, the EPA revised the ozone NAAQS and established the 1997 8-hour ozone NAAQS. Under the EPA's Phase I rules governing the transition from the 1-hour ozone standard to the 1997 8-hour ozone standard, the EPA revoked the 1-hour ozone standard effective June 2005 but also established "anti-backsliding" provisions that, in effect, carried forward most of the SIP requirements that had applied to an area by virtue of its 1-hour ozone classification to areas designated as nonattainment for the 1997 8-hour ozone standard. See 69 FR 23951 (April 30, 2004); 40 CFR 51.905(a)(1); and 40 CFR 51.900(f). The VMT emission offset requirement is one of the requirements carried forward; thus, the South Coast, which is designated nonattainment for the 1997 8-hour ozone standard, remains subject to the VMT emissions offset requirement for the 1-hour ozone standard, notwithstanding the revocation of that standard in 2005. Moreover, the South Coast is also subject to

emissions offset requirement).

the VMT emissions offset requirement for the 1997 8-hour ozone standard by virtue of its classification, initially as "Severe-17" and later as "Extreme," for the 1997 ozone standard. See 69 FR 23858 (April 30, 2004); 70 FR 71612 (November 29, 2005); 75 FR 24409 (May 5, 2010); and 40 CFR 51.902(a).

In 2008, to comply with the VMT emissions offset requirement for the 1-hour ozone standard, the SCAQMD submitted a demonstration showing decreases in aggregate year-over-year motor vehicle emissions in the South Coast from a base year (1990) through the applicable attainment year (2010).⁵ The following year, the EPA approved the South Coast 1-hour ozone VMT emissions offset demonstration as meeting the VMT emissions offset requirement of CAA section 182(d)(1)(A). See 74 FR 10176 (March 10, 2009). The EPA also approved the South Coast VMT emissions offset demonstration submitted in connection with the area's "Extreme" classification for the 1997 8-hour ozone standard. See 77 FR 12674 (March 1, 2012). Once again, the approved demonstration showed decreases in aggregate year-over-year motor vehicle emissions in the South Coast from a base year through the applicable attainment year.⁶

⁵ Letter from Elaine Chang, Deputy Executive Officer, SCAQMD, dated September 10, 2008.

⁶ See the SCAQMD's *Final 2007 Air Quality Management Plan* (June 2007) for the

In approving the South Coast VMT emissions offset demonstrations in 2009 and 2012, the EPA applied its then-longstanding interpretation of the VMT emissions offset requirement, first explained in guidance in the General Preamble to Title I of the Clean Air Act (see 57 FR 13498, at 13521-13523, April 16, 1992), that no transportation control measures are necessary if aggregate motor vehicle emissions are projected to decline each year from the base year of the plan to the attainment year. See 74 FR 10176, at 10179-10180 (March 10, 2009); 76 FR 57872, at 57889 (September 16, 2011). However, in response to a legal challenge brought in the U.S. Court of Appeals for the Ninth Circuit, the Court ruled against the EPA's approval of the South Coast VMT emissions offset demonstration for the 1-hour ozone standard, determining that the EPA incorrectly interpreted the statutory phrase "growth in emissions" in section 182(d)(1)(A) as meaning a growth in "aggregate motor vehicle emissions" versus a growth solely from VMT. Essentially, the Court ruled that additional transportation control measures are required whenever vehicle emissions are projected to be higher than they would have been had VMT not increased, even when aggregate vehicle emissions are actually

South Coast Air Basin, chapter 6, table 6-12.

decreasing. However, the Court acknowledged that "clean car technology" advances could result in there being no increase in emissions even in the face of VMT growth, which would then allow VMT to increase without triggering the requirement to adopt offsetting transportation control measures. *Association of Irrigated Residents v. EPA*, 632 F.3d. 584, at 596-597 (9th cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012.

Based on this reasoning, the Court remanded the approval of the South Coast VMT emissions offset demonstration for the 1-hour ozone standard back to the EPA for further proceedings consistent with the opinion. In response, we withdrew our approval of the South Coast VMT emissions offset demonstration for the 1-hour ozone standard and disapproved it. See 78 FR 18849 (March 28, 2013). Furthermore, because our approval of the South Coast VMT emissions offset demonstration for the 1997 8-hour ozone standard was predicated on the same rationale as the corresponding South Coast demonstration for the 1-hour ozone standard that was rejected by the Ninth Circuit, we withdrew our approval of the South Coast VMT emissions offset demonstration for the 1997 8-hour ozone standard and disapproved it as well. *Id.*

Specifically, we withdrew our previous approvals of the VMT emissions offset demonstrations and disapproved the same because we found that the submitted VMT emissions offset demonstrations were not consistent with the Court's ruling on the requirements of section 182(d)(1)(A) because they failed to identify, compared to a baseline assuming no VMT growth, the level of "increased" emissions, within the overall set of declining aggregate motor vehicle emissions, resulting solely from VMT growth and to show how such relatively higher emissions, compared to what they would have been had VMT held constant, have been offset through adoption and implementation of transportation control strategies and transportation control measures. See 77 FR 58067, at 58070 (September 19, 2012).⁷

II. Submittal of Revised South Coast VMT Emissions Offset Demonstrations

A. 2012 South Coast AQMP and CARB's Technical Supplement

As described above, in March 2013, the EPA finalized the withdrawal of its previous approvals of SIP revisions submitted

⁷ For a more detailed discussion of the regulatory and SIP submittal history of the South Coast Air Basin 1-hour and 8-hour nonattainment areas with respect to the VMT emissions offset requirement under CAA section 182(d)(1)(A), the South Coast VMT emissions offset demonstrations, the related EPA actions, and the ensuing litigation and Court decision, please see our rule proposing to disapprove our previous approvals of the South Coast emissions offset demonstrations and disapproval of the same at 77 FR 58067, at 58068-58070 (September 19, 2012).

by the State of California to meet the VMT emissions offset requirement under the CAA for the South Coast 1-hour and 1997 8-hour ozone nonattainment areas. See 78 FR 18849 (March 28, 2013). In response, CARB and the SCAQMD ("State") prepared and adopted revised South Coast VMT emissions offset demonstrations to show compliance with the VMT emissions offset requirement under section 182(d)(1)(A) for the 1-hour and 1997 8-hour ozone standards consistent with the Court's opinion in the *Association of Irrigated Residents* case discussed above.

On February 13, 2013, CARB submitted, as a revision to the California SIP, the *Final 2012 Air Quality Management Plan* (December 2012) ("2012 South Coast AQMP") for the South Coast Air Basin ("2012 South Coast AQMP"), adopted by SCAQMD on December 21, 2012 and by CARB on January 25, 2013.⁸ The revised South Coast VMT emissions offset demonstrations, which are the subject of today's proposed action, are included in the February 13, 2013 SIP revision submittal as appendix VIII, titled "Vehicle Miles Traveled Emissions Offset Demonstration" (February 2013), to the 2012 South Coast AQMP. In this document, we are proposing action only on the revised South Coast VMT

⁸ See CARB Resolution 13-3 (January 25, 2013) and letter from James N. Goldstene, Executive Officer, CARB, to Jared Blumenfeld, Regional Administrator, EPA Region 9, letter with enclosures (February 13, 2013).

emissions offset demonstrations contained in appendix VIII of the 2012 South Coast AQMP. The EPA will take action on the other portions of the 2012 South Coast AQMP, including the revised South Coast 1-hour ozone attainment demonstration found in appendix VII to 2012 South Coast AQMP, in separate rulemakings.

The revised South Coast VMT emissions offset demonstrations address the requirement under CAA section 182(d)(1)(A) for a state with ozone nonattainment areas classified as "Severe" or "Extreme" to identify and adopt specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in VMT or the numbers of vehicle trips. The demonstrations include analyses for the 1-hour ozone and 1997 8-hour ozone standards.

On April 3, 2014, CARB submitted a technical supplement to the revised South Coast VMT emissions offset demonstration submitted on February 13, 2013 ("technical supplement"). See letter and enclosures from Lynn Terry, Deputy Executive Officer, CARB, to Deborah Jordan, Director, Air Division, EPA Region 9. CARB's technical supplement includes a revised set of motor vehicle emissions estimates reflecting technical changes to the

inputs used to develop the original set of calculations.⁹ While the vehicle emissions estimates in CARB's technical supplement differ from those contained in the demonstration as submitted on February 13, 2013, the conclusions of the analysis remain the same.

B. CAA Procedural Requirements for Submittals of SIPs and SIP Revisions

CAA section 110(a)(1) and (2) and CAA section 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submission of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with the EPA's implementing regulations in 40 CFR 51.102.

CARB and the District have satisfied applicable statutory and regulatory requirements for reasonable public notice and hearing prior to adoption and submittal of the 2012 South Coast

⁹ The principal difference between the two sets of calculations is that CARB's technical supplement includes running exhaust, start exhaust, hot soak, and running loss emissions of VOCs in all of the emissions scenarios. These processes are directly related to VMT and vehicle trips. The revised calculation excludes diurnal and resting loss emissions of VOCs from all of the emissions scenarios because such evaporative emissions are related to vehicle population rather than to VMT or vehicle trips.

AQMP, which as noted above, included the revised South Coast VMT emissions offset demonstrations as appendix VIII to the plan. The District provided a public comment period and held a public hearing prior to the adoption of the 2012 South Coast AQMP on December 7, 2012.¹⁰ CARB provided the required public notice and opportunity for public comment prior to its January 25, 2013 public hearing on the plan.¹¹

The SIP submittal includes notices of the District and CARB public hearings as evidence that all hearings were properly noticed. We therefore find that the submittals meet the procedural requirements of CAA sections 110(a) and 110(l).

III. Evaluation of Revised South Coast VMT Emissions Offset Demonstrations

A. Section 182(d)(1)(A) and the EPA's August 2012 VMT Emissions Offset Demonstration Guidance

As noted previously, the first element of CAA section 182(d)(1)(A) requires that areas classified as "Severe" or "Extreme" submit a SIP revision that identifies and adopts transportation control strategies and transportation control measures sufficient to offset any growth in emissions from

¹⁰ See SCAQMD Governing Board Resolution No. 12-19.

¹¹ See CARB Board Resolution No. 13-3.

growth in VMT or the number of vehicle trips. In response to the Court's decision in *Association of Irrigated Residents v. EPA*, also discussed above, the EPA issued a memorandum titled *Guidance on Implementing Clean Air Act Section 182(d)(1)(A): Transportation Control Measures and Transportation Control Strategies to Offset Growth in Emissions Due to Growth in Vehicle Miles Travelled* (herein referred to as the "August 2012 guidance").¹²

The August 2012 Guidance discusses the meaning of the terms, "transportation control strategies" (TCSs) and "transportation control measures" (TCMs), and recommends that both TCSs and TCMs be included in the calculations made for the purpose of determining the degree to which any hypothetical growth in emissions due to growth in VMT should be offset. Generally, TCSs is a broad term that encompasses many types of controls including, for example, motor vehicle emission limitations, inspection and maintenance (I/M) programs, alternative fuel programs, other technology-based measures, and TCMs, that would fit within the regulatory definition of "control strategy." See, e.g., 40 CFR 51.100(n). TCMs are

¹² Memorandum from Karl Simon, Director, Transportation and Climate Division, Office of Transportation and Air Quality, to Carl Edland, Director, Multimedia Planning and Permitting Division, EPA Region 6, and Deborah Jordan, Director, Air Division, EPA Region 9, August 30, 2012.

defined at 40 CFR 51.100(r) as meaning "any measure that is directed toward reducing emissions of air pollutants from transportation sources. Such measures include, but are not limited to those listed in section 108(f) of the Clean Air Act[,] " and generally refer to programs intended to reduce the VMT, the number of vehicle trips, or traffic congestion, such as programs for improved public transit, designation of certain lanes for passenger buses and high-occupancy vehicles (HOVs), trip reduction ordinances, and the like.

The August 2012 guidance explains how states may demonstrate that the VMT emissions offset requirement is satisfied in conformance with the Court's ruling. States are recommended to estimate emissions for the nonattainment area's base year and the attainment year. One emission inventory is developed for the base year, and three different emissions inventory scenarios are developed for the attainment year. For the attainment year, the state would present three emissions estimates, two of which would represent hypothetical emissions scenarios that would provide the basis to identify the "growth in emissions" due solely to the growth in VMT, and one that would represent projected actual motor vehicle emissions after fully accounting for projected VMT growth and offsetting

emissions reductions obtained by all creditable TCSs and TCMS. See the August 2012 guidance for specific details on how states might conduct the calculations.

The base year on-road VOC emissions should be based on VMT in that year and it should reflect all enforceable TCSs and TCMS in place in the base year. This would include vehicle emissions standards, state and local control programs such as I/M programs or fuel rules, and any additional implemented TCSs and TCMS that were already required by or credited in the SIP as of that base year.

The first of the emissions calculations for the attainment year would be based on the projected VMT and trips for that year, and assume that no new TCSs or TCMS beyond those already credited in the base year inventory have been put in place since the base year. This calculation demonstrates how emissions would hypothetically change if no new TCSs or TCMS were implemented, and VMT and trips were allowed to grow at the projected rate from the base year. This estimate would show the potential for an increase in emissions due solely to growth in VMT and trips. This represents a "no action" taken scenario. Emissions in the attainment year in this scenario may be lower than those in the base year due to the fleet that was on the road in the base year

gradually being replaced through fleet turnover; however, provided VMT and/or numbers of vehicle trips will in fact increase by the attainment year, they would still likely be higher than they would have been assuming VMT had held constant.

The second of the attainment year's emissions calculations would also assume that no new TCSs or TCMs beyond those already credited have been put in place since the base year, but would also assume that there was no growth in VMT and trips between the base year and attainment year. This estimate reflects the hypothetical emissions level that would have occurred if no further TCMs or TCSs had been put in place and if VMT and trip levels had held constant since the base year. Like the "no action" attainment year estimate described above, emissions in the attainment year may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced by cleaner vehicles through fleet turnover, but in this case they would not be influenced by any growth in VMT or trips. This emissions estimate would reflect a ceiling on the attainment emissions that should be allowed to occur under the statute as interpreted by the Court because it shows what would happen under a scenario in which no offsetting TCSs or TCMs have yet been put in place and VMT and trips are held constant during

the period from the area's base year to its attainment year. This represents a "VMT offset ceiling" scenario. These two hypothetical status quo estimates are necessary steps in identifying the target level of emissions from which states would determine whether further TCMS or TCSs, beyond those that have been adopted and implemented in reality, would need to be adopted and implemented in order to fully offset any increase in emissions due solely to VMT and trips identified in the "no action" scenario.

Finally, the state would present the emissions that are actually expected to occur in the area's attainment year after taking into account reductions from all enforceable TCSs and TCMS that in reality were put in place after the baseline year. This estimate would be based on the VMT and trip levels expected to occur in the attainment year (i.e., the VMT and trip levels from the first estimate) and all of the TCSs and TCMS expected to be in place and for which the SIP will take credit in the area's attainment year, including any TCMS and TCSs put in place since the base year. This represents the "projected actual" attainment year scenario. If this emissions estimate is less than or equal to the emissions ceiling that was established in the second of the attainment year calculations, the TCSs or TCMS

for the attainment year would be sufficient to fully offset the identified hypothetical growth in emissions.

If, instead, the estimated projected actual attainment year emissions are still greater than the ceiling which was established in the second of the attainment year emissions calculations, even after accounting for post-baseline year TCSs and TCMs, the state would need to adopt and implement additional TCSs or TCMs to further offset the growth in emissions and bring the actual emissions down to at least the "had VMT and trips held constant" ceiling estimated in the second of the attainment year calculations, in order to meet the VMT offset requirement of section 182(d)(1)(A) as interpreted by the Court.

B. Revised South Coast VMT Emissions Offset Demonstrations

For the revised South Coast VMT emissions offset demonstrations, the State used EMFAC2011, the latest EPA-approved motor vehicle emissions model for California.¹³ The EMFAC2011 model estimates the on-road emissions from two combustion processes (i.e., running exhaust and start exhaust) and four evaporative processes (i.e., hot soak, running losses,

¹³ See 78 FR 14533 (March 6, 2013) regarding the EPA's approval of the 2011 version of the California EMFAC model (short for EMISSIONFACTOR) and announcement of its availability. The software and detailed information on the EMFAC vehicle emission model can be found on the following CARB web site: <http://www.arb.ca.gov/msei/msei.htm>.

diurnal losses, and resting losses). The EMFAC2011 model combines trip-based VMT data from the regional transportation planning agencies (i.e., Southern California Association of Governments), starts data based on household travel surveys, and vehicle population data from the California Department of Motor Vehicles. These sets of data are combined with corresponding emission rates to calculate emissions.

Emissions from running exhaust, start exhaust, hot soak, and running losses are a function of how much a vehicle is driven. As such, emissions from these processes are directly related to VMT and vehicle trips, and the State included emissions from them in the calculations that provide the basis for the revised South Coast VMT emissions offset demonstrations. The State did not include emissions from resting loss and diurnal loss processes in the analysis because such emissions are related to vehicle population, not to VMT or vehicle trips, and thus are not part of "any growth in emissions from growth in *vehicle miles traveled or numbers of vehicle trips* in such area" (emphasis added) under CAA section 182(d)(1)(A).

The revised South Coast VMT emissions offset demonstrations address both the 1-hour ozone standard and the 1997 8-hour ozone standard and include two different "base year" scenarios: 1990,

for the purposes of the VMT emissions offset demonstration for the 1-hour ozone standard, and 2002, for the purposes of the VMT emissions offset demonstration for the 1997 8-hour ozone standard. The "base year" for VMT emissions offset demonstration purposes should generally be the same "base year" used for nonattainment planning purposes. In 2012, the EPA approved the 2002 base year inventory for the South Coast for the purposes of the 1997 8-hour ozone standard, 77 FR 12674, at 12693 (March 1, 2012), and thus, the State's selection of 2002 as the base year for the revised South Coast VMT emissions offset demonstration for the 1997 8-hour ozone standard is appropriate. With respect to the 1-hour ozone standard, the revised South Coast attainment demonstration, submitted to the EPA on February 13, 2013, relies on a base year of 2008, rather than 1990; however, the State's selection of 1990 as the base year for the VMT offset demonstration is appropriate because 1990 was used as the base year for 1-hour ozone SIP planning purposes under the CAA Amendments of 1990, which established, among other requirements, the VMT emissions offset requirement in section 182(d)(1)(A).

The demonstrations also include the previously described three different attainment year scenarios (i.e., no action, VMT offset ceiling, and projected actual) but the attainment year

differs between the two demonstrations. Year 2022 was selected as the attainment year for the revised VMT emissions offset demonstration for the 1-hour ozone standard, and year 2023 was selected as the attainment year for the revised demonstration for the 1997 8-hour ozone standard. For the 1997 8-hour ozone standard, the State's selection of 2023 is appropriate given that the approved South Coast 1997 8-hour ozone plan demonstrates attainment by the applicable attainment date of June 15, 2024 based on the 2023 controlled emissions inventory. See 76 FR 57872, at 57885 (September 16, 2011) and 77 FR 12674, at 12693 (March 1, 2012).

For the 1-hour ozone standard, in 2013, the EPA found the California SIP for the South Coast to be substantially inadequate to comply with the obligation to adopt and implement a plan providing for attainment of the 1-hour ozone standard. 78 FR 889 (January 7, 2013). Under this "SIP call," effective February 6, 2013, the State was required to develop a revised South Coast plan demonstrating attainment of the 1-hour ozone standard as expeditiously as practicable, but no later than five years from the effective date of the SIP call, or, in this case, no later than February 6, 2018, unless the State can demonstrate that it needs up to an additional five years, i.e., up to

February 6, 2023, to attain the standard in light of the severity of the nonattainment problem and the availability and feasibility of control measures.

The revised South Coast 1-hour ozone attainment demonstration, which was submitted along with the revised VMT emissions offset demonstrations and the rest of the 2012 South Coast AQMP on February 13, 2013, provides a justification for the full five years beyond the statutory five-year attainment date. The revised South Coast 1-hour ozone attainment demonstration thus provides a demonstration of attainment of the 1-hour ozone standard in the South Coast by 2023 based on the controlled 2022 emissions inventory. In a separate rulemaking action published elsewhere in today's Federal Register, EPA is proposing to approve 2022 as the attainment year for the 1-hour ozone standard in the South Coast.¹⁴ Based on the proposed approval of 2022 as the attainment year for the South Coast for the 1-hour ozone standard, we find CARB's selection of Year 2022 as the attainment year for the revised VMT emissions offset demonstration for the 1-hour ozone standard to be acceptable.

¹⁴ In this context, "attainment year" refers to the ozone season immediately preceding a nonattainment area's attainment date. In the case of the South Coast for the 1-hour ozone standard, the proposed applicable attainment date is February 6, 2023, and the ozone season immediately preceding that date will occur in year 2022.

For additional background and justification regarding the 2022 attainment year, please see the separate rulemaking action published elsewhere in today's Federal Register.

Tables 1 and 2 summarize the relevant distinguishing parameters for each of the emissions scenarios and show the State's corresponding VOC emissions estimates. Table 1 provides the parameters and emissions estimates for the revised VMT emissions offset demonstration for the 1-hour ozone standard, and table 2 provides the corresponding values for the revised demonstration for the 1997 8-hour ozone standard.

Table 1: VMT Emissions Offset Inventory Scenarios and Results for 1-Hour Ozone Standard

Scenario	VMT		Starts		Controls	VOC Emissions
	Year	1000/day	Year	1000/day	Year	tpd
Base Year	1990	257,490	1990	46,060	1990	873
No Action	2022	394,838	2022	72,531	1990	488
VMT Offset Ceiling	1990	257,490	1990	46,060	1990	312
Projected Actual	2022	394,838	2022	72,531	2022	65

Source: CARB's Technical Supplement, April 3, 2014.

Table 2: VMT Emissions Offset Inventory Scenarios and Results for 1997 8-Hour Ozone Standard

Scenario	VMT	Starts	Controls	VOC
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						Emissions
	Year	1000/day	Year	1000/day	Year	tpd
Base Year	2002	330,268	2002	58,039	2002	280
No Action	2023	395,750	2023	72,730	2002	115
VMT Offset Ceiling	2002	330,268	2002	58,039	2002	89
Projected Actual	2023	395,750	2023	72,730	2023	62

Source: CARB's Technical Supplement, April 3, 2014.

For the two "base year" scenarios, the State ran the EMFAC2011 model for the applicable base year (i.e., 1990 for the 1-hour ozone standard and 2002 for the 1997 8-hour ozone standard) using VMT and starts data corresponding to those years. As shown in tables 1 and 2, the State estimates South Coast VOC emissions at 873 tons per day (tpd) in 1990 and 280 tpd in 2002.

For the two "no action" scenarios, the State first identified the on-road motor vehicle control programs (i.e., TCSs or TCMs) put in place since the base years and incorporated into EMFAC2011 and then ran EMFAC2011 with the VMT and starts data corresponding to the applicable attainment year (i.e., 2022 for the 1-hour ozone standard and 2023 for the 1997 8-hour ozone standard) without the emissions reductions from the on-road

motor vehicle control programs put in place after the base year. Thus, the "no action" scenarios reflect the hypothetical VOC emissions that would occur in the attainment years in the South Coast if the State had not put in place any additional TCSs or TCMs after 1990 (for the 1-hour ozone VMT emissions offset demonstration) or after 2002 (for the 8-hour ozone demonstration). As shown in tables 1 and 2, the State estimates "no action" South Coast VOC emissions at 488 tons per day (tpd) in 2022 and 115 tpd in 2023. The principal difference between the two estimates is that the latter value (used for the revised VMT emissions offset demonstration for the 8-hour ozone standard) reflects the emissions reductions from TCSs and TCMs put in place by the end of 2002 whereas the former value (used for the revised demonstration for the 1-hour ozone standard) reflects only the emissions reductions from TCSs and TCMs put in place by the end of 1990. The most significant of the measures adopted since 1990 and relied upon for the 1-hour ozone VMT emissions offset demonstration include tiered (series of increasingly stringent limits) emissions standards for new motor vehicles (i.e., Low Emissions Vehicles I, II, and III standards), content specifications for gasoline (i.e., California Reformulated Gasoline Phases 1, 2, and 3), and

enhancements to the State's I/M program (i.e., Smog Check II). See attachments 1 and 2 of Appendix VIII to the 2012 South Coast AQMP (i.e., the revised South Coast VMT emissions offset demonstrations) for the entire list of TCSs and TCMs adopted by the State since 1990.¹⁵

For the "VMT offset ceiling" scenarios, the State ran the EMFAC2011 model for the attainment years but with VMT and starts data corresponding to base year values. Like the "no action" scenarios, the EMFAC2011 model was adjusted to reflect the VOC emissions levels in the attainment years without the benefits of the post-base-year on-road motor vehicle control programs. Thus, the "VMT offset ceiling" scenarios reflect hypothetical VOC emissions in the South Coast if the State had not put in place any TCSs or TCMs after the base years and if there had been no growth in VMT or vehicle trips between the base years and the attainment years.

The hypothetical growth in emissions due to growth in VMT and trips can be determined from the difference between the VOC emissions estimates under the "no action" scenarios and the corresponding estimates under the "VMT offset ceiling"

¹⁵ The docket for today's action includes an updated list of the post-1990 transportation control strategies in attachment 1 of Appendix VIII to the South Coast AQMP.

scenarios. Based on the values in tables 1 and 2, the hypothetical growth in emissions due to growth in VMT and trips in the South Coast would have been 176 tpd (i.e., 488 tpd minus 312 tpd) for the purposes of the revised VMT emissions offset demonstration for the 1-hour ozone standard, and 26 tpd (i.e., 115 tpd minus 89 tpd) for the purposes of the corresponding demonstration for the 8-hour ozone standard. These hypothetical differences establish the levels of VMT growth-caused emissions that need to be offset by the combination of post-baseline year TCMs and TCSs and any necessary additional TCMs and TCSs.

For the "projected actual" scenario calculations, the State ran the EMFAC2011 model for the attainment years with VMT and starts data at attainment year values and with the full benefits of the relevant post-baseline year motor vehicle control programs. For this scenario, the State included the emissions benefits from TCSs and TCMs put in place since the base year. The most significant measures put in place during the 2002 to 2023 time frame, relied upon for the 8-hour ozone demonstration, include Low Emission Vehicles II and III standards, Zero Emissions Vehicle standards, and California Reformulated Gasoline Phase 3. Again, see attachments 1 and 2 of the Appendix VIII to the 2012 South Coast AQMP. These measures are also

relied upon in the approved South Coast 8-hour ozone attainment demonstration and the revised South Coast 1-hour ozone attainment demonstration.¹⁶

As shown in tables 1 and 2, the results from these calculations establish projected actual attainment-year VOC emissions of 65 tpd for the 1-hour standard demonstration and 62 tpd for the 1997 8-hour standard demonstration. The State then compared these values against the corresponding VMT offset ceiling values to determine whether additional TCMs or TCSs would need to be adopted and implemented in order to offset any increase in emissions due solely to VMT and trips. Because the "projected actual" emissions are less than the corresponding "VMT Offset Ceiling" emissions, the State concluded that the demonstration shows compliance with the VMT emissions offset requirement and that there are sufficient adopted TCSs and TCMs to offset the growth in emissions from the growth in VMT and vehicle trips in the South Coast for both the 1-hour and 1997 8-

¹⁶ See 77 FR 12674 (March 1, 2012) for the EPA's approval or waiver/authorization of the TCSs and TCMs relied upon for the 1997 8-hour ozone attainment demonstration in the 2007 South Coast AQMP. Also see *Technical Support Document for the Final Rulemaking Action on the South Coast 2007 8-Hour Ozone Plan and the South Coast Portions of the Revised 2007 State Strategy*, USEPA Region 9, December 2011. Also see footnote 15. Per section 209 of the CAA, the EPA has previously waived (for control of emissions from new motor vehicles of new motor vehicle engines prior to March 30, 1966) or authorized (for control emissions of nonroad engines or vehicles) all such TCSs and TCMs.

hour standards. In fact, taking into account of the creditable post-baseline year TCMs and TCSs, the State showed that they offset the hypothetical differences by 423 tpd for the 1-hour standard and by 53 tpd for the 1997 8-hour standards, rather than merely the required 176 tpd and 26 tpd, respectively.¹⁷

Based on our review of the State's submittal, including the technical supplement, we find the State's analysis to be acceptable and agree that the State has adopted sufficient TCSs and TCMs to offset the growth in emissions from growth in VMT and vehicle trips in the South Coast for the purposes of the 1-hour ozone and 1997 8-hour ozone standard. As such, we find that the revised South Coast VMT emissions offset demonstrations, comply with the VMT emissions offset requirement in CAA section 182(d)(1)(A), and therefore, we propose approval of the revised South Coast VMT emissions offset demonstrations for the 1-hour ozone and 1997 8-hour ozone standards as a revision to the California SIP.

IV. EPA's Proposed Action and Request for Public Comment

¹⁷ The offsetting VOC emissions reductions from the TCSs and TCMs put in place after the respective base year can be determined by subtracting the "projected actual" emissions estimates from the "no action" emissions estimates in tables 1 and 2. For the purposes of the 1-hour ozone demonstration, the offsetting emissions reductions, 423 tpd (488 tpd minus 65 tpd), exceed the growth in emissions from growth in VMT and vehicle trips (176 tpd). For the purposes of the 8-hour ozone demonstration, the offsetting emissions reductions, 53 tpd (115 tpd minus 62 tpd), exceed the growth in emissions from growth in VMT and vehicle trips (26 tpd).

Under CAA section 110(k)(3), and for the reasons set forth above, EPA is proposing to approve CARB's submittal dated February 13, 2013 of the revised South Coast VMT emissions offset demonstrations for the 1-hour ozone and 1997 8-hour ozone standards, as supplemented by CARB on April 3, 2014, as a revision to the California SIP. We are proposing to approve this SIP revision because we believe that it demonstrates that California has put in place specific enforceable transportation control strategies and transportation control measures to offset the growth in emissions from the growth in VMT and vehicle trips in the South Coast for both the 1-hour ozone and 1997 8-hour ozone standards, and thereby meets the applicable requirements in section 182(d)(1)(A) of the Clean Air Act.

EPA is soliciting public comments on the issues discussed in this document or on other relevant matters. We will accept comments from the public on this proposal for the next 30 days. We will consider these comments before taking final action.

V. Statutory and Executive Order Reviews

The Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State

choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely proposes to approve a State plan revision as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For these reasons, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045

(62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control,
Incorporation by reference, Intergovernmental regulations,
Nitrogen dioxide, Ozone, Reporting and recordkeeping
requirements, Volatile organic compounds.

AUTHORITY: 42 U.S.C. 7401 et seq.

Dated: May 5, 2014.

Jared Blumenfeld,
Regional Administrator,
EPA Region 9.

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